

REMARKS

Applicants have carefully reviewed the Non-Final Office action mailed June 23, 2011 rejecting claims 1, 3-10, and 13-15. Notwithstanding the rejection of claims to the contrary, applicants pending claims 1, 3-10 and 13-15 patentably distinguish over the art of record for the reasons given below. Applicants request reconsideration of the rejections.

35 U.S.C. § 103(a) Rejection of Claims 1-4, 8, and 11

Claims 1, 3-4, 8, and 11 stand Finally rejected under 35 U.S.C. § 103(a) as obvious over the publication, C. Gomila and A. Kobilansky, *SEI Message for Film Grain Encoding*, JVT of ISO/IEC MPEG and ITU-T VCEG, Geneva, Switzerland, May 2003, pages 1-14 (XP-002308742), in view of applicants' admitted prior art regarding the decoder 12 described in applicants' specification at page 5, line 18 through page 6, line 4.

With regard to the Gomila and Kobilansky publication, the examiner contends that this reference teaches applicants' features of: (a) decoding the video stream; and (b) adding noise to at least one pixel in a picture in the video stream following decoding in an amount correlated to luminance information of at least a portion of a current picture, as recited in claim 1. The examiner acknowledges that Gomila and Kobilansky publication does not teach applicants' previously added claim feature of increasing the added comfort noise in accordance with a quantization parameter representing quantization of the incoming video stream. However, the examiner notes that applicants' decoder 12 generates a quantization parameter. Therefore, the examiner contends that a skilled artisan would have included the H.264 decoder of applicants' specification in the Gomila film grain simulation system to yield applicants' invention.

Applicants acknowledge that their decoder 12 generates a quantization parameter. However, the examiner has not shown that generating a quantization parameter *per se* would lead a skilled artisan to necessarily increase the comfort noise as recited in applicants' claims. In that regard, the examiner should understand the fundamental

difference existing between adding comfort noise to a video image to hide artifacts, as opposed to adding film grain. As discussed in applicants' specification at pages 1 and 2, the addition of comfort noise to a video image serves to hide artifacts that can appear in the image as a result of video compression. Applicants' invention serves to advantageously increase the comfort noise in response to increased quantization of the image which causes more artifacts to appear. Thus, applicants' invention automatically serves to add more comfort noise in response to more artifacts.

Film grain simulation, as discussed in the Gomila and Kobilansky publication, serves to add film grain to a video image to replace the film grain removed during decoding. Thus, Gomila and Kobilansky add film grain to increase the artifacts in a video image, not to hide them. The quantization of video during decoding has little if any affect on the film grain within the decoded image. Thus, Gomila et al. would have no need to increase or decrease the amount of film grain added to the decoded image based on quantization. Rather, the amount of film grain added by Gomila et al. to the image depends on the film grain present in the original image which is of no relevance with regard adding comfort noise to hide video artifacts resulting from decoding.

In summary, the examiner has not established a *prima facie* case of obviousness because the examiner has not shown how adding the H.264 decoder to the Gomila and Kobilansky film grain simulation process would achieve the same solution as applicants' invention, namely the increasing the added comfort noise in accordance with a quantization parameter representing quantization of the incoming video stream. In the absence of any teaching in Gomila et al. that increasing the film grain noise in response to an increase in the video quantization would prove beneficial, the examiner's rejection fails. Accordingly, applicants request withdrawal of the 35 U.S.C. § 103(a) rejection of claims 1, 3-4, 8, and 11.

35 U.S.C. § 103(a) Rejection of Claims 5, 6, 13, and 14

Claims 5, 6, 13, and 14 stand rejected under 35 U.S.C. § 103(a) as obvious over the publication by Cristina Gomila, entitled SEI Message for *Film Grain Encoding*:

syntax and results, JVT of ISO/IEC MPEG and ITU-T VCEG, September 2003, pages 1-11 (XP-002308743), in view of the Gomila and Kobilansky publication discussed previously, and in view of the applicants' admitted prior art (decoder 12). Applicants respectfully traverse the rejection.

As discussed above, the Gomila and Kobilansky publication, in combination with applicants' admitted prior (decoder 12) fails with respect to claims 1, 3-4, 8, and 11. The combination Gomila and Kobilansky publication and applicants' admitted, prior art does not show how adding the H.264 decoder to the Gomila et al. film grain simulation process would achieve the same solution as applicants' invention, namely the increasing the added comfort noise in accordance with a quantization parameter representing quantization of the incoming video stream.

The Gomila publication describes specific syntax in connection with the SEI message for conveying film grain information separate from the coded image. However, like the Gomila and Kobilansky publication, the Gomila publication says nothing about increasing the strength of the comfort noise in accordance with a quantization parameter representing quantization of the coded video stream.

Thus, the addition of the Gomila publication to the combination of the Gomila and Kobilansky publication and applicants admitted prior art adds nothing with regard to suggesting applicants' feature of increasing the strength of the comfort noise in accordance with a quantization parameter representing quantization of the coded video stream. Therefore, the combination of Gomila publication, the Gomila and Kobilansky publication and applicants admitted prior references would not teach all of the features of amended claims 1, 8 and 14, nor dependent claims 5, 6, and 13. Therefore, claims 5, 6, 13, and 14 patentably distinguish over the art of record, warranting withdrawal of the 35 U.S.C. § 103(a) rejection of these claims.

35 U.S.C. § 103(a) Rejection of Claims 7, 9, and 10

35 U.S.C. § 103(a) Rejection of Claim 15

Claims 7, 9, 10, and 15 stand rejected under 35 U.S.C. § 103(a) as obvious over the Gomila and Kobilansky publication, in view of US Patent 7,773,741 in the name of

Wulf LeBlanc et al. The examiner has not explicitly listed applicants' admitted prior art as one of the applied references, but refers to such art in connection with the rejection so applicants presume that the examiner based the 35 U.S.C. § 103(a) rejection of claims 7, 9, 10 and 15 on such art.

In rejecting applicants' claims, the examiner contends that the Gomila and Kobilansky publication and applicants' admitted prior art teaches all of the features of claims 7, 9, 10, and 15 except for the use of an Infinite Impulse Response (IIR) filter. To cure that deficiency, the examiner has cited the Leblanc et al. patent. Applicants respectfully traverse the rejection.

The applicants have discussed the Gomila and Kobilansky publication at length above in connection with the 35 U.S.C. § 103(a) rejection of claims 1-4, and 8 and 11. Applicants will not repeat that discussion for the sake of brevity, but reiterate the examiner has not established a *prima facie* case of obviousness with regard to claims 1 and 8, from which claims 7, 9 and 10 depend because the examiner has not shown how adding the H.264 decoder to the Gomila and Kobilansky film grain simulation process would achieve the same solution as applicants' invention, namely the increasing the added comfort noise in accordance with a quantization parameter representing quantization of the incoming video stream. In the absence of any teaching in the Gomila and Kobilansky publication that increasing the film grain noise in response to an increase in the video quantization would prove beneficial, the examiner's rejection fails.

The Leblanc et al. patent describes a system that discriminates between voice signals and data signals modulated by a voice band carrier. The signal processing system of LeBlanc et al. includes a voice exchange, a data exchange, and a call discriminator, with the voice exchange capable of exchanging voice signals between a switched circuit network and a packet based network.

While the LeBlanc et al. patent does discuss the quantization of data signals, as well as the addition of comfort noise, the patent says nothing about increasing the strength of the comfort noise in accordance with a quantization parameter representing quantization of the coded video stream as recited in applicants' claims 1, 8, and 14. In

Serial No. 10/572,690
Art Unit: 2611
Response to Non-Final OA mailed June 23, 2011

Docket No. PU030273
Customer No. 24498

this regard, the LeBlanc et al. patent adds nothing to the combination of Gomila and Kobilansky publication and applicants' admitted prior art.

Given that the combination of the Gomila and Kobilansky publication, applicants' admitted prior art and the LeBlanc et al. patent fails to teach all of the features of applicants' amended claims 1, 8, and 14, then claims 7, 9-10 and 15, which depend therefrom, respectively, patentably distinguish over the art of record. Applicants request withdrawal of the 35 U.S.C. § 103(a) rejection of claims 7, 9-10 and 15.

Conclusion

In view of the foregoing, applicants solicit allowance of the claims. If the Examiner cannot take such action, the Examiner should contact the applicant's attorney at (609) 734-6820 to arrange a mutually convenient date and time for a telephonic interview.

No fees are believed due with regard to this Amendment. Please charge any fee or credit any overpayment to Deposit Account No. 07-0832.

Respectfully submitted,
Alexander Tourapis et al.

By: /Robert B. Levy/
Robert B. Levy
Attorney for Applicants
Reg. No. 28,234
Phone (609) 734-6820

Patent Operations
Thomson Licensing LLC
P.O. Box 5312
Princeton, New Jersey 08543-5312
July 8, 2011